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Substitute for form 1449A/PTO				Application Number	09/742,171
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Filing Date	12/19/00
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	A.M. Thompson
Sheet	1	of	7	Attorney Docket Number	SPLX.P0017

U.S. PATENT DOCUMENTS

Examiner* Initials	Cite No. ¹	U.S. Patent Document Number	Kind Code ² (if known)	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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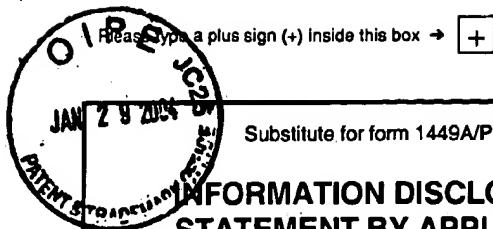
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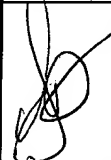


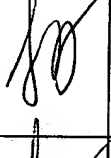


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				Group Art Unit	2825
				Examiner Name	A.M. Thompson
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FOREIGN PATENT DOCUMENTS								
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		Office ³	Number ⁴	Kind Code (if known)				
	42.	JP	H03-173471	A	Tawada et al.	07-26-1991	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	43.	JP	H05-243379	A	Masako Kubota	09-21-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	44.	JP	H05-102305	A	Akihiro Sato	04-23-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	45.	JP	H07-86407	A	Shinpei Miura	03-31-1995	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	46.	JP	H09-162279	A	Masaaki Yoshida	06-20-1997	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	47.	JP	411296560	A	Matsumoto et al.	10-29-1999	with English translation of Abstract;	

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				Group Art Unit	2825
				Examiner Name	A.M. Thompson
Sheet	4	of	7	Attorney Docket Number	SPLX.P0017

FOREIGN PATENT DOCUMENTS							
48.	JP	2000-82743	A	Igarashi et al.	03-21-2000	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓

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NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T	6	
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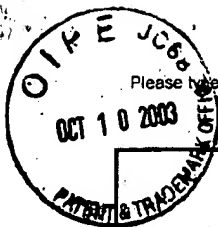
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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	09/742,171
				Filing Date	12/19/00
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	A.M. Thompson
Sheet	1	of	4	Attorney Docket Number	SPLX.P0017

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RELATED U.S. PATENT DOCUMENTS

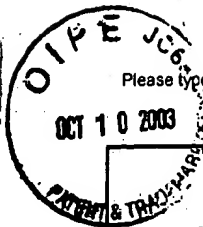
Examiner Initials	Cite No.	U.S. Patent Document Number	Date of filing MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Related Application Data
	1.	2002/0100007	12-06-2200	Steven Teig et al.	Parent application; present application is a continuation of 2002/0100007.
	2.	2002/0133798	12-06-2000	Steven Teig et al.	Application regarding related placement technology
	3.	2002/0073390 S/N 09/737,210	12-13-2000	Steven Teig et al.	Continuation of 2002/0133798
	4.	Preliminary Amendment S/N 09/737,210	12-13-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0073390 does not accurately reflect the claims of S/N 09/737,210
	5.	S/N 09/737,220	12-13-2000	Steven Teig et al.	Continuation of 2002/0133798
	6.	S/N 09/737,245	12-13-2000	Steven Teig et al.	Continuation of 2002/0133798
	7.	S/N 09/739,460	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007
	8.	2002/0124231 S/N 09/739,580	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
	9.	Preliminary Amendment S/N 09/739,580	12-15-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0124231 does not accurately reflect the claims of S/N 09/739,580.
	10.	S/N 09/739,589	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
	11.	2003/0121015 S/N 09/745,067	12-19-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
	12.	Preliminary Amendment S/N 09/745,067	12-19-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0121015 does not accurately reflect the claims of S/N 09/745,067.
	13.	2002/0069397	01-13-2002	Steven Teig et al.	CIP of parent 2002/0100007.
	14.	2002/0170027	02-20-2002	Steven Teig et al.	CIP of parent 2002/0100007.
	15.	2002/0157075	02-20-2002	Steven Teig et al.	CIP of parent 2002/0100007.

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				Filing Date	12/19/00
				First Named Inventor	St v n Teig
				Group Art Unit	2825
				Examiner Name	A.M Thompson
Sheet	2	of	4	Attorney Docket Number	SPLX.P0017

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RELATED U.S. PATENT DOCUMENTS					
16.	2003/0088841 S/N 10/329,241	12-23-2002	Steven Teig et al.	CIP of 2002/0133798	
17.	Preliminary Amendment S/N 10/329,241	12-23-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088841 does not accurately reflect the claims of S/N 10/329,241.	
18.	2003/0079193	12-07-2001	Steven Teig et al.	Application regarding related routing technology	
19.	2003/0018947	12-07-2001	Steven Teig et al.	Application regarding related routing technology	
20.	2002/0147958	10-19-2001	Steven Teig et al.	Application regarding related routing technology	
21.	2003/0063614	01-04-2002	Steven Teig et al.	Application regarding related routing technology	
22.	2003/0064559	01-04-2002	Steven Teig et al.	Application regarding related routing technology	
23.	2003/0063568	01-04-2002	Steven Teig et al.	Application regarding related routing technology	
24.	2003/0101428 S/N 10/040,915	01-05-2002	Steven Teig et al.	Application regarding related routing technology	
25.	Preliminary Amendment S/N 10/040,915	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0101428 does not accurately reflect the claims of S/N 10/040,915.	
26.	2002/0166105 S/N 10/040,948	01-05-2002	Steven Teig et al.	Application regarding related routing technology	
27.	Preliminary Amendment S/N 10/040,948	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0166105 does not accurately reflect the claims of S/N 10/040,948.	
28.	2003/0023943 S/N 10/040,954	01-05-2002	Steven Teig et al.	Application regarding related routing technology	
29.	Preliminary Amendment	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0023943 does not	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Filing Date	12/19/00
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	A.M Thompson
Sheet	3	of	4	Attorney Docket Number	SPLX.P0017

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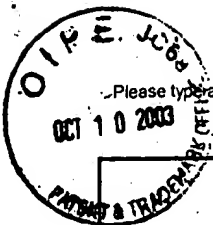
RELATED U.S. PATENT DOCUMENTS					
		S/N 10/040,954			accurately reflect the claims of S/N 10/040,954.
	30.	2003/0043827 S/N 10/040,953	01-05-2002	Steven Teig et al.	Application regarding related routing technology
	31.	Preliminary Amendment S/N 10/040,953	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0043827 does not accurately reflect the claims of S/N 10/040,953.
	32.	2003/0066042 S/N 10/040,963	01-05-2002	Steven Teig et al.	Application regarding related routing technology
	33.	Preliminary Amendment S/N 10/040,963	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0066042 does not accurately reflect the claims of S/N 10/040,963.
	34.	2002/0174412 S/N 10/041,942	01-07-2002	Steven Teig et al.	Application regarding related routing technology
	35.	Preliminary Amendment S/N 10/041,942	01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0174412 does not accurately reflect the claims of S/N 10/041,942.
	36.	2003/0088844 S/N 10/041,957	01-07-2002	Steven Teig et al.	Application regarding related routing technology
	37.	Preliminary Amendment S/N 10/041,957	01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088844 does not accurately reflect the claims of S/N 10/041,957.
	38.	2002/0199165 S/N 10/046,864	01-13-2002	Steven Teig et al.	Application regarding related routing technology. Also, CIP of parent application 2002/0100007.
	39.	Preliminary Amendment S/N 10/046,864	01-13-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0199165 does not accurately reflect the claims of S/N 10/046,864.
	40.	2003/0066043	01-13-2002	Steven Teig et al.	Application regarding related routing

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Sheet	4	of	4	Attorney Docket Number	SPLX.P0017

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					technology
41.	2003/0115566	01-13-2002	Steven Teig	Application regarding related routing technology	
42.	2003/0056187 S/N 10/047,982	01-14-2002	Steven Teig et al.	Application regarding related routing technology. Also, CIP of parent application 2002/0100007.	
43.	Preliminary Amendment S/N 10/047,982	01-14-002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0056187 does not accurately reflect the claims of S/N 10/047,982	
44.	2003/0066044	01-13-2002	Steven Teig et al.	Application regarding related routing technology	
45.	2003/0066045	01-13-2002	Steven Teig et al.	Application regarding related routing technology	
46.	2003/0088845 S/N 10/047,978	01-13-2002	Steven Teig et al.	Application regarding related routing technology. Also, CIP of parent application 2002/0100007.	
47.	Preliminary Amendment for S/N 10/047,978	01-13-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088845 does not accurately reflect the claims of S/N 10/047,978.	

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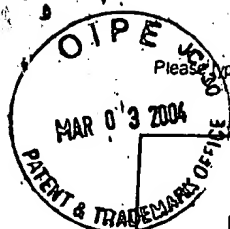
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(use as many sheets as necessary)

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				Examiner Name	A.M Thompson
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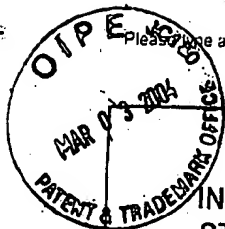
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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	09/742,171
				Filing Date	12/19/00
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	A.M Thompson
Sheet	2	of	4	Attorney Docket Number	SPLX.P0017

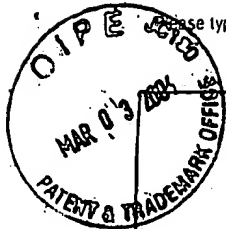
RELATED U.S. PATENT DOCUMENTS					
16.	2003/0088841 S/N 10/329,241	12-23-2002	Steven Teig et al.	CIP of 2002/0133798	
17.	Preliminary Amendment S/N 10/329,241	12-23-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088841 does not accurately reflect the claims of S/N 10/329,241.	
18.	2003/0079193	12-07-2001	Steven Teig et al.	Application regarding related routing technology	
19.	2003/0018947	12-07-2001	Steven Teig et al.	Application regarding related routing technology	
20.	2002/0147958	10-19-2001	Steven Teig et al.	Application regarding related routing technology	
21.	2003/0063614	01-04-2002	Steven Teig et al.	Application regarding related routing technology	
22.	2003/0064559	01-04-2002	Steven Teig et al.	Application regarding related routing technology	
23.	2003/0063568	01-04-2002	Steven Teig et al.	Application regarding related routing technology	
24.	2003/0101428 S/N 10/040,915	01-05-2002	Steven Teig et al.	Application regarding related routing technology	
25.	Preliminary Amendment S/N 10/040,915	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0101428 does not accurately reflect the claims of S/N 10/040,915.	
26.	2002/0166105 S/N 10/040,948	01-05-2002	Steven Teig et al.	Application regarding related routing technology	
27.	Preliminary Amendment S/N 10/040,948	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0166105 does not accurately reflect the claims of S/N 10/040,948.	
28.	2003/0023943 S/N 10/040,954	01-05-2002	Steven Teig et al.	Application regarding related routing technology	
29.	Preliminary Amendment	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0023943 does not	

Examiner Signature		Date Considered	17-May-2004
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				Group Art Unit	2825
				Examiner Name	A.M Thompson
Sheet	3	of	4	Attorney Docket Number	SPLX.P0017

RELATED U.S. PATENT DOCUMENTS					
		S/N 10/040,954			accurately reflect the claims of S/N 10/040,954.
30.	2003/0043827 S/N 10/040,953		01-05-2002	Steven Teig et al.	Application regarding related routing technology
31.	Preliminary Amendment S/N 10/040,953		01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0043827 does not accurately reflect the claims of S/N 10/040,953.
32.	2003/0066042 S/N 10/040,963		01-05-2002	Steven Teig et al.	Application regarding related routing technology
33.	Preliminary Amendment S/N 10/040,963		01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0066042 does not accurately reflect the claims of S/N 10/040,963.
34.	2002/0174412 S/N 10/041,942		01-07-2002	Steven Teig et al.	Application regarding related routing technology
35.	Preliminary Amendment S/N 10/041,942		01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0174412 does not accurately reflect the claims of S/N 10/041,942.
36.	2003/0088844 S/N 10/041,957		01-07-2002	Steven Teig et al.	Application regarding related routing technology
37.	Preliminary Amendment S/N 10/041,957		01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088844 does not accurately reflect the claims of S/N 10/041,957.
38.	2002/0199165 S/N 10/046,864		01-13-2002	Steven Teig et al.	Application regarding related routing technology. Also, CIP of parent application 2002/0100007.
39.	Preliminary Amendment S/N 10/046,864		01-13-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0199165 does not accurately reflect the claims of S/N 10/046,864.
40.	2003/0066043		01-13-2002	Steven Teig et al.	Application regarding related routing

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Sheet	1	of	7	Applicant Number	09/742,171
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				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	A.M. Thompson
				Attorney Docket Number	SPLX.P0017

U.S. PATENT DOCUMENTS

Examiner's Initials	Cite No.	U.S. Patent Document Number	Kind Code ² (if known)	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	2001/0009031	A1	07-19-2001	Nitta et al.	
	2.	2002/0182844	A1	12-05-2002	Igarashi et al.	
	3.	2003/0025205	A1	02-06-2003	Shively	
	4.	2003/0005399	A1	01-02-2003	Igarashi et al.	
	5.	4,593,363		06-03-1986	Burstein et al.	
	6.	5,267,176		11-30-1993	Antreich et al.	
	7.	5,587,923		12-24-1996	Wang	
	8.	5,618,744		04-08-1997	Suzuki et al.	
	9.	5,633,479		05-27-1997	Hirano	
	10.	5,637,920		06-10-1997	Loo	
	11.	5,640,327		06-17-1997	Ting	
	12.	5,663,891		09-02-1997	Bamji et al.	
	13.	5,757,089		05-26-1998	Ishizuka	
	14.	5,784,289		07-21-1998	Wang	
	15.	5,798,936		08-25-1998	Cheng	
	16.	5,838,583		11-17-1998	Varadarajan et al.	
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	18.	5,980,093		11-09-1999	Jones et al.	
	19.	6,070,108		05-30-2000	Andreev et al.	
	20.	6,128,767		10-03-2000	Chapman	

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				First Named Inventor	Steven Teig
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Sheet	2	of	7	Attorney Docket Number	SPLX.P0017

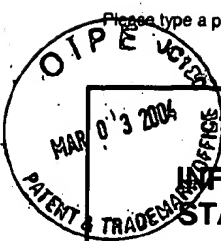
U.S. PATENT DOCUMENTS						
21.	6,209,123	B1	03-27-2001	Maziasz et al.		
22.	6,253,363	B1	06-26-2001	Gasanov et al.		
23.	6,295,634	B1	09-25-2001	Matsumoto		
24.	6,324,674	B2	11-27-2001	Andreev et al.		
25.	6,324,675	B1	11-27-2001	Dutta et al.		
26.	6,327,693	B1	12-04-2001	Cheng et al.		
27.	6,327,694	B1	12-04-2001	Kanazawa		
28.	6,330,707	B1	12-11-2001	Shinomiya et al.		
29.	6,378,121	B1	04-23-2002	Hiraga		
30.	6,407,434	B1	06-18-2002	Rostoker et al.		
31.	6,415,422	B1	07-02-2002	Mehrotra et al.		
32.	6,442,743	B1	08-27-2002	Sarrafzadeh et al.		
33.	6,448,591	B1	09-10-2002	Juengling		
34.	6,473,891	B1	10-29-2002	Shively		
35.	6,480,991	B1	11-12-2002	Cho et al.		
36.	6,490,713	B2	12-03-2002	Matsumoto		
37.	6,519,751	B2	02-11-2003	Sriram et al.		
38.	6,543,043	B1	04-01-2003	Wang et al.		
39.	6,546,540	B1	04-08-2003	Igarashi et al.		
40.	6,557,145	B2	04-29-2003	Boyle et al.		
41.	6,567,967	B2	05-20-2003	Greidinger et al.		

Examiner Signature	Date Considered
	17-May-2004

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FOREIGN PATENT DOCUMENTS

Examiner [*] Initials	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T a
		Office ³	Number ⁴	Kind Cod (if known)				
	42.	JP	H03-173471	A	Tawada et al.	07-26-1991	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	43.	JP	H05-243379	A	Masako Kubota	09-21-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	44.	JP	H05-102305	A	Akihiro Sato	04-23-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	45.	JP	H07-86407	A	Shinpei Miura	03-31-1995	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	46.	JP	H09-162279	A	Masaaki Yoshida	06-20-1997	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	47.	JP	411296560	A	Matsumoto et al.	10-29-1999	with English translation of Abstract;	

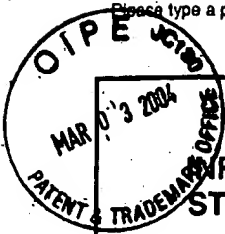
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				Examiner Name	A.M. Thompson
Sheet	4	of	7	Attorney Docket Number	SPLX.P0017

FOREIGN PATENT DOCUMENTS								
	48.	JP	2000-82743	A	Igarashi et al.	03-21-2000	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓

Examiner Signature		Date Considered	17 May 2004
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NON PATENT LITERATURE DOCUMENTS					
Examiner* Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T 6
	49.	Ahuja, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.			
	50.	Brady, L. et al., Channel Routing on a 60° Grid, extended abstract, pp. 956-931.			
	51.	Brambilla, A. et al., Statistical Method for the Analysis of Interconnects Delay in Submicrometer Layouts, IEEE, 8/2001, pp. 957-966.			
	52.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192.			
	53.	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35.			
	54.	Cheng, K. et al., Manhattan or Non Manhattan? A Study of Alternative VLSI Routing Architectures, pp 47-52, 2000.			
	55.	Cheng, K., Steiner Problem in Octilinear Routing Model, a Thesis Submitted for the Degree of Master of Science, National University Singapore, 1995, pp. 1-122.			
	56.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 26, iss. 3A, pp. 929-933.			
	57.	Cong, J. et al., Efficient Heuristics for the Minimum Shortest Path Steiner Arborance Problem with Applications to VLSI Physical Design, Cadence Design Systems and UCLA Computer Science Department, pp.88-95.			
	58.	Cong, J. et al., Performance-Driven Multi-Layer General Routing for PCB/MCM Designs, UCLA Computer Science Department, 1998, pp. 356-361.			
	59.	Enbody, R. et al., Near-Optimal n-Layer Channel Routing, 23 rd Design Automation Conference, 1986, pp. 708-714.			
VVV	60.	Fang, S. et al., Constrained Via Minimization with Practical Considerations for Multi-Layer VLSI/PCB Routing Problems, 28 th ACM/IEEE Design Automation Conference, 1991, pp. 60-65.			
	61.	Hom, I. et al., Estimation of the Number of Routing Layers and Total Wirelength in a PCB Through Wiring Distribution Analysis, 1996, pp. 1-6.			

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Substitute for form 1449A/PTO				Application Number	09/742,171
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Filing Date	12/19/00
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	A.M. Thompson
Sheet	6	of	7	Attorney Docket Number	SPLX.P0017

NON PATENT LITERATURE DOCUMENTS

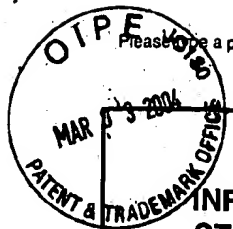
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Examiner Signature	Date Considered
	17 May 2004

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